TITLE OF THE INVENTION
Networked Computer System for Viewing and Ordering Prints of Photographs Taken at an Event

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CROSS REFERENCE TO RELATED APPLICATIONS

Priority is claimed to U.S. Provisional Patent Application No. 60/062,075, Filed October 16, 1997, Entitled "Networked Computer System for Viewing and Ordering Prints

10 of Photographs Taken at an Event" and incorporated herein by reference.

STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT
15   N/A.

BACKGROUND OF THE INVENTION

Professional photographers often take photographs at significant events, such as weddings, graduations, athletic

20 contests, parties or other gatherings, with the intention of selling prints and other merchandise based on those photographs to the event's participants and to others interested in the proceedings. Typically, the purchase of the photographs involves a series of logistical and financial

25 engagements in which the buyer views the photographs, chooses a subset of them and elects various sizes, finishes, formats, styles and materials for the prints and other merchandise.

These engagements are often complicated by the fact that by the time they occur, many of the event's participants have

30 gone home to geographically dispersed locales. Low-quality prints, or "proofs," of some or all of the photographs are often created for consideration by potential buyers. Sets of these proofs are shipped to the prospects, along with the forms and instructions needed to place orders with and remit

35 payment to the photographer. These forms and instructions are often complex, requiring the buyer to specify the desired photographs along with the desired print sizes, or other

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merchandise preferences, and calculate the resulting price.
If there are a number of buyers in distant locales, the proof
set must be sent to each in succession, or multiple proof
sets must be created. The time, expense and inconvenience
of these processes impedes the professional photographer's
efforts to profit from the sale of his photographs and the
buyer's efforts to obtain mementos of important events.

BRIEF SUMMARY OF THE INVENTION

The present invention provides a system which allows for
transferral of photographic images from a number of
photographers to a typically website based photographic
repository order server, remote electronic review such as
over the Internet by customers of the images stored thereby,
election of final print orders through such an electronic
interface, and exchange of payment from the customer to the
photographer, thereby allowing shipment of the order without
necessitating a meeting to peruse the full proof set, select
print options, or transact payment. This system comprises
a server or system of servers, typically connected to the
Internet and configured for communication via the World Wide
Web and other Internet protocols, which performs or supports
a number of functions, including the following: transferal
of photographic images from a number of photographers to the
server system, automated processing of the images in
preparation for display, editing and sequencing of images in
preparation for display, display of particular sets of images
to the appropriate groups of event participants, ordering of
prints or other merchandise based on the images by event
participants, collection of payment for those prints,
forwarding of print order information to photographers or
other parties responsible for fulfilling the orders, and
calculation of payments due the photographer and the owner
or operator of the system. It also provides services that
aid in notifying event participants of the online
availability of the images and informing them of the times
and procedures for viewing them. By performing these

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functions and services, the system acts as a specialized and integrated network application making it possible to sell event photos without necessitating a meeting to review the images or the circulation of traditional proofs.

Users interact with the system through a graphical user interface, which is typically accessed remotely through standard World Wide Web browsing client software conversant in languages such as HTML, JAVA, XML, and further capable of recognizing images in such protocols as JPEG and JIF. Different subsets of this interface are available to different classes of users, including photographers, event hosts, couples, and guests, so that each has an appropriate level of control over the system functions to assure security.

Initially, a photographer opens an account and a password is issued that lets the photographer access a set of interfaces through which he can enter information about each event, including separate logins for the event's hosts and guests. While creating this initial event profile, the photographer may order promotional materials, such as cards imprinted with access instructions and the guest login, which the system prints out for distribution at the event. When the photographer completes the profile, the system creates a coming soon interface where guests and hosts who visit the site before the images are available can leave their e-mail addresses so the system can notify them when the pictures are ready to be viewed. The photographer's subset of the interface also provides access to editing functions that enable him to select and arrange the photos and otherwise prepare them for presentation to event participants, and to account administration functions, which provide him with information about his account, including fees incurred, merchandise ordered and the balance of his account.

Event hosts typically have access to a subset of the interface that provides editing, arranging and presentation control capabilities similar to those provided the photographer. Hosts also have access to image viewing and

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print ordering functions.

Guests typically have access to a more limited range of the interface, including primarily the image viewing and print ordering functions. All classes of users typically have access to an online bulletin board, or guestbook, which enables them to post messages viewable by all other users.

BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING

The present invention will be more fully understood by reference to the following detailed description and drawings, of which:

Fig. 1 is a context diagram of the photograph of the photograph viewing and ordering system as defined by the present invention;

Fig. 2 is a block diagram of the system of Fig. 1;

Fig. 3 is a flowchart of the method used to effect viewing and ordering of photographs as defined herein;

Fig. 4 shows the menu structure of the user interface as defined by the present invention;

Fig. 5 shows the photographer's image entry interface;

Fig. 6 shows the upload picture images interface;

Fig. 7 shows the price list entry interface;

Fig. 8 shows the scanning interface;

Fig. 9 shows the file transmission interface;

Fig. 10 shows the physical media transmission interface;

Fig. 11 shows the direct Internet upload interface;

Fig. 12 shows the e-mail attachment interface;

Fig. 13 shows the event profile entry interface for wedding-type events;

Fig. 14 shows the event profile entry interface for non-wedding events;

Fig. 15 shows the create categories entry interface;

Fig. 16a shows the categorize images interface;

Figs. 16b-16c show the image sequencing interface;

Figs. 17a-17b show the captioning interface;

Figs. 18a-18c show the order selection interface;

Fig. 19 shows the review order interface;

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Fig. 20 shows the personal proofbook selection interface;

Fig. 21 shows the order checkout interface;

Fig. 22 shows the billing interface;

Fig. 23 shows the photographer login interface;

Fig. 24 shows the coming soon interface;

Fig. 25 shows the E-Prints™ handout card;

Fig. 26 shows the select photo collection interface;

Fig. 27 shows the select event profile interface;

Figs. 28a-28b show the review album interface;

Fig. 29 shows the editing options interface;

Fig. 30 shows the event summary interface;

Fig. 31 shows the search interface;

Fig. 32 shows the search results interface;

Fig. 33 shows the guestbook interface; and

Fig. 34 shows the add message interface.

DETAILED DESCRIPTION OF THE INVENTION

Fig. 1 illustrates the context of the system encompassed by the present invention. The E-Prints™ server 10 stores digital images of photographs taken by photographers 16 at an Event 14, and makes them available for interactive viewing by guests 18 and host 12. Guests 18 and host 12 may order merchandise associated with those images by interacting with the E-Prints™ server.

Fig. 2, illustrates the components of the system encompassed by the present invention, and the network links and relationships between those components. A photographer 16 who has taken photographs at a an event, such as a wedding, graduation, sporting event, or portrait sitting, may transmit the photographs to the E-Prints™ server 10 by one of several methods and in one of several formats: digital versions of the photographs, created by a photographer 16 or a photofinishing lab 20, may be sent to the E-Prints™ server as digital files via communications links 19, 32, or loaded onto physical media 22, 23 and shipped to an E-Prints™ operator 29 for processing and

transmission to the E-Prints™ server 10 via communications link 31.

Images received by the E-Prints™ server 10 are processed, with input from the photographer 16, and made available for viewing and manipulation via the Internet 24 by the host 12 and guests 18, who may place orders for photographic prints or other image-related merchandise by interacting with the E-Prints™ server 10. Financial information relating to orders so placed is exchanged by the E-Prints™ server 10 and financial institution 26 via communications link 28. Fulfillment of orders so placed may take place in one of several ways: orders may be transmitted to the photographer 16 for fulfillment; orders may be transmitted to photofinishing Lab 20 for fulfillment; and orders may be transmitted by communications link 31 to E-Prints™ printing and shipping facility 30 for fulfillment.

The process by which a photographer, guests and hosts interact with the system is detailed below, with references to figures showing the graphical user interface (GUI) through which the system's functions are accessed. Interaction with this GUI typically takes place via the Internet, using standard World Wide Web browser client software. A simplified flowchart of a typical order sequence as effected by the present invention is depicted in Fig. 3. A photographer shoots a set of pictures at an event 300. A lab processes the film 302 so that the photography studio or photographer may select images for proofs 304. Electronic versions of these proofs are shipped or electronically transmitted to the order server 306 for creation of an electronic proofbook 308. Interactive access to this electronic proofbook allows users and guests to select images for physical prints 310. Monetary information is exchanged 312 to allow payment for prints, and the studio fills and ships the order to the customer 314.

A series of graphical user interface (GUI) screens are utilized in the above embodiment to effect a transaction. Referring to Fig. 4, the menu selection screen structure is

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summarized. Using a standard browser 104 for access to a
public network such as the Internet allows photographers and
customers (host and guests) to access the respective parts
of the order server interface. Following is a description of
the traversal of the user interface as it would occur in the
flowchart of Fig. 3.

As shown in Fig. 5, The photographer interface 105
allows a photographer to specify an event 113, 114, upload
a photograph image file 106, or set a price list 107 for
various sizes of finished prints (Fig. 7). Upload file 106
is selected to allow entry and transmission of new images
from an event.

To use the E-Prints™ system, a photographer establishes
an account by entering information in a GUI form, and
indicating agreement to the terms of the business
relationship between the operator of the E-Prints™ system and
the photographer.

Creation of the new account is acknowledged by an e-mail
message to the photographer, containing a unique account
identification and access code enabling the photographer to
identify him or herself to the E-Prints™ system, and gain
access to its functions via a login screen (Fig 23).

The photographer creates one or more price lists
containing descriptions, product codes and prices for
photographic prints or other merchandise to be sold via
E-Prints™ by entering information into a GUI form (Fig. 7).
The photographer may also create sale packages. Each package
consists of a description, a fixed, total price and a
specified number of each of several different types of
photographic prints or merchandise. These price lists and
sale packages are retained by the system for use with image
collections submitted by the same photographer, who may
access the price lists and sale packages and make changes to
them using the account administration interface 105.

The photographer next creates an event profile by
entering information into the appropriate GUI form for the
type of event (Figs. 13, 14). The event profile includes

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such information as the name of the event, or photographic subjects, the date the event is to take place and the price list and/or packages to be used by host or guests when ordering merchandise associated with the event. When the event profile is submitted to the E-Prints server, a coming soon interface (Fig. 24) is created for the event, as described below. The photographer may also order handout cards (Fig. 25) as described below.

The wedding couple may choose the style of their online album, and enter information for their wedding announcement, including place, time and travel directions. They may also select optional services including RSVP, which enables guests to RSVP using the E-Prints™ system, and registry, which enables guests to see where the couple is registered for gifts, through Internet and traditional services. These optional services are accessible via the coming soon interface (Fig. 24).

Handout cards (Fig. 25) may be prepared to aid in dissemination of the password and other access information to the event participants. These cards may be prepared by the operator of the E-Prints™ system, the event organizer or the photographer. If they are to be prepared by the of the E-Prints™ system, the photographer or event organizer (Host) may access a GUI order form on the E-Prints™ system for that purpose. The photographer may order handout cards at the time of creating an Event Profile Fig. 13, 14. The handout cards are distributed to guests and participants by the photographer or event organizer at the event.

The photographer then photographs the event, using a film, digital or other electronic camera. Guests, host, or other event participants in possession of the access information for an event may access the coming soon interface (Fig. 24) and submit their names and e-mail addresses so that they may be notified by e-mail when the pictures are ready for interactive viewing and ordering via the E-Prints™ system.

Fig. 6 shows the scanning screen, which allows scanning

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of physical prints into a transmittible electronic form on the photographer's studio computer system through and the scan interface 108 (Fig. 8). Alternatively, such images could be directly transferred from a digital camera or from a photofinishing lab. Next, the electronic images must be sent to the order server using transmit screen 109. Transmit screen 109 allows the photographer to select which mode of communication to use to send the electronic images. Direct Internet or modem connection 111 (Fig. 11), E-mail attachment 112 (Fig. 12), or physical shipment of optical or magnetic media 110 (Fig. 10) may be used.

Digital versions of the photographs taken at the event are transmitted to the E-Prints™ system by one of several methods. Referring to Fig. 2, the photographer 16 may take the photographs using a digital camera, and upload the digital images to the E-Prints™ server via communications link 19. Alternatively, the photographer 16 takes the photographs using a digital camera, loads the images onto physical storage media 22, 23 (optical disk, magnetic disk, or other non-volatile media) and ships the media to an E-Prints™ operator 29. The E-Prints operator extracts the digital images from the media and transmits them via communications link 31 to the E-Prints™ server 10. As another option, the photographer takes the photographs using a film camera and sends the film to a photofinishing lab 20. The lab creates digital versions of the images. The digital images may be sent to the E-Prints™ server 10 directly, via communications link 32, or via the photographer and communications link 19. The photofinishing lab may also load the images onto physical storage media and ship the media to an E-Prints™ operator 29 directly, or via the photographer 16. As a further option, the photographer takes the photographs using a film camera and sends the film to a photofinishing lab 20, which returns developed film and photographic proofs. The photographer creates digital versions of the images from the film or proofs, and either uploads them to the E-Prints server 10 via communications

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link 19, or ships them to an E-Prints™ operator 29 on
physical media. Once the electronic image file of the event
is uploaded, the photographer creates an association between
the images and an event data profile previously entered for
either a wedding 113 (Fig. 13) or non-wedding 114 (Fig. 14)
event. This association is established through the select
profile screen 119 (Fig. 27). The images in the profile must
then be arranged either by the photographer or host through
the functions on the editing options screen 115 (Fig. 29).

Before this can occur, the system must prepare the
photos. The E-Prints™ system processes the images into the
appropriate size and format for display. This may require
intervention by an E-Prints™ operator, depending on the
nature of the images. The collection of images for a
specific event are then made accessible to the photographer
in the select photo collection interface Fig. 26. A stepwise
tutorial aspect of the interface can guide new users
sequentially through the process. First, general category
names through which to group the pictures are entered by name
via create categories screen 116 (Fig. 15). Pictures are
then arranged into these categories by categorize pictures
screen 117a, picture sequence screen 117b, and set sequence
screen 417c (Figs. 16a-16c). A user selects the order to
arrange the pictures by clicking on the check box 214 beside
the image to be placed. Next, the user clicks the place
images button 216 under the position which the picture should
appear. Individual captions for pictures may be selected,
entered, and changed through captioning menu 118a and
captioning screen 118b (Figs. 17a-17b). Text can be entered
in image specific caption boxes 218, or a common caption for
all images on the displayed page can be entered in common
caption box 220. Once sequenced and captioned by the
photographer, an online proofbook 308 corresponding to the
event has been generated for perusal by the host 12 and
guests 18.

To illustrate the editing and customization steps more
clearly, the photographer logs onto the E-Prints™ system via

the login page (Fig. 23), and uses a series of GUIs to configure the collection of photographs for viewing as described below.

The select photo collection interface Fig. 26 is used by the photographer to select one of the collections of photographs 281 associated with his or her account.

The photographer then uses the select event profile interface Fig. 27 to select the correct event profile from the list of event profiles 291 submitted by that photographer. To facilitate the selection, event profiles may be reviewed in the event profile review Page 292. The photographer then uses the create categories interface Fig. 15 to divide the photographs into named categories. The photographer may select from suggested categories, create his or her own categories, or select "Automatic" to have numbered categories created automatically by the E-Prints™ system. The photographer then uses the categorize pictures interface (Fig. 16a) to assign each picture to one of the created categories. Pulldown menus beneath each picture 172 contain the names of the categories created above, and a "Delete" option. To facilitate categorization, there is the option of assigning all pictures on each screen to a single category by making a single selection in the select all menu 171. Images for which the delete option is selected are placed in a "deleted images" category, and may be restored to the event at any time prior to the event being published (see below). The photographer may also change the orientation of photographs in 90 degree increments using controls in the categorize pictures interface Fig 16a. The picture sequencing interface Fig. 16b shows the photographer the created categories, and the number of images assigned to each. An autosequence button 217b is provided, which causes the E-Prints™ system to automatically sequence the images in within each category in simple alphanumeric order. This option is provided for photographers who do not wish to exert control over the image sequence within categories. Clicking on a category 117b provides access to the set sequence

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interface Fig. 16c for the selected category. At this
interface, the photographer may set the desired sequence in
which the images in the selected category will appear when
viewed by guests or host. To place an image in the sequence,
the photographer clicks the checkbox beneath the desired
image in the selection pane 117c, which shows all images in
the category, then click the place image button 217c beneath
the desired position in the sequence pane 317c. When
sequencing is complete, or automatic sequencing has been
elected, the photographer may add captions to some or all of
the images using the captioning interface Fig. 17a-17b.
Using the captioning menu Fig. 17a, the photographer may
select a page of images to caption from the list of available
pages 118a, or elect not to caption images by selecting the
no captions button 218a. If a page is selected from the list
118a, the photographer may use the set captions interface
Fig. 17b to enter captions for one or more images on that
page by entering the captions in the space provided beneath
each picture 118b. Captions may be indexed for use as the
basis for a secondary search, so that a host or guest may
find a particular image within a proofbook by conducting such
a search for specific caption text. For example, the
photographer may caption each photo in a college graduation
with the name of the student, enabling hosts and guests to
find the single student's image they wish to view within the
online proofbook for the graduation. Using the review album
interface (Figs. 28a, 28b), the photographer may review the
photographs to confirm that the above described
categorization, sequencing, orientation and profile selection
have been properly performed. The editing options interface
Fig. 29 may be used to return to the specified function and
make such changes. The event summary interface Fig. 30
provides the photographer with information on the collection
of images to be published, and on the charges that will be
made to his or her account. Selecting the confirm button 132
accepts the charges, and publishes the collection of images,
making it available for viewing on the E-Prints™ system by

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the event host, and guests in possession of correct access information. The photographer may select from several options governing the availability of the collection of images, as enumerated below: i.) the images are immediately accessible to host and guests in possession of correct access information. ii.) the images are available only to hosts for a period of time specified by the photographer, after which they are made available to hosts and guests in possession of correct access information. iii.) the images are available to the host only. If this last option is chosen, the host may make the images available to guests.

A host 12 or guest 18 may then access the online proofbook at the order server 10 by performing a search using a search interface (Fig. 31), then selecting the desired event from the list returned in the search result 134 (Fig. 32). Upon making their selection, they are prompted for access information, unless the photographer specified that the proofbook have no access restrictions, as provided for in the event profile entry interface shown in Figs. 13 & 14. A host, or guest, in addition to ordering prints, may also enter messages to guests. Once granted password access, the purchaser (host or guest) may view images of the photographs, purchase merchandise, and access the guest book. At the guest book interface (Fig. 33), they may read messages 135 left by others visiting that proofbook, and use the add message interface (Fig. 34) to leave a message. To view images of the photographs, and purchase merchandise, the purchaser selects a page 204 (Fig. 18a) of proofs to view, as arranged in categories 117b and sequenced 117c by the photographer and/or the host. A page 120b of images is then displayed to the user (Fig. 18b), and can be selected by clicking on the desired image. Selected images 206 can also be entered into a personal online proofbook for subsequent viewing and/or purchase. Once selected for purchase, the print selection screen 120c (Fig. 18c) is displayed for selection of print size and quantity. Checkout screen 121 (Fig. 19) may be accessed at any time to review or complete

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the order. Quantity 208 may also be modified by the checkout
screen 121. Following the checkout screen are shipping 123
and billing 124 screens (Figs. 21 and 22, respectively), to
allow postal address 210 and credit card information 212 to
5 be entered. Customers may save and access their personal
proofbook at 122 for subsequent access or to compile a
finished album over time. In this manner, all customers of
an event need not arrange a face to face meeting with a
photographer, and may elect any number of prints from the
10 displayed proofs at any time during the period the proofbook
is available on the order server.

The following is a review in summary of the viewing and
ordering sequence. Upon publishing of the event, as
described above, an email message is sent to each individual
15 who used the coming soon interface (Fig. 24). The email
message contains a notification that the collection of images
is available for viewing and ordering, and the necessary
access information. Upon selecting the desired event's title
from the list returned by the E-Prints™ server, the user is
20 prompted to enter the access information provided in the
handout cards Fig. 25. This information is also provided in
the notification email, and may be disseminated by the
photographer or event organizer by various means. Upon
entering the access information, the user is presented with
25 an interface (Fig. 18a) for interactively viewing the images,
and ordering associated merchandise. On this interface are
listed the categories created by the photographer at Fig. 15,
with pages of images that may selected for viewing. Access
is also provided to the guestbook interface (Figs. 33 and 34)
30 where the user may leave text messages and read those left
by others.

Optional viewing and editing privileges may also be
established. The photographer my elect to make the
collection of images available for viewing and editing by a
35 subset of users who are provided privileged access
information (hosts). Examples of such hosts are: the wedding
couple, in the case of a wedding; the event organizer, in the

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case of a reunion or convention. Hosts typically have access to image categorizing, captioning, and sequencing capabilities similar to those made available to the photographer as described above.

To initiate viewing of the photographs and ordering merchandise a host or guest (users) may access the images associated with a particular event, and order photographic prints and other merchandise, by interacting with the E-Prints™ server using a series of GUI screens. A search interface (Fig. 31) is provided to enable the user to access the collection of images by entering information associated with the event, for example, the name of the bride or groom in the case of a wedding, and performing a search. Selecting a page for viewing presents the user with an interface (Fig. 18b) providing images of photographs taken at the event, and controls for functions, including: viewing additional pages of images, viewing merchandise compiled for ordering, placing the compiled order, or viewing a larger version of a selected image, together with ordering information and controls for adding merchandise to their order (Fig. 18c). If the photographer has specified package pricing, the user may select a package, and will then be prompted as to product selections remaining to be made to complete the package. The user may view a larger version of a selected photograph, and specify merchandise to be added to his or her order using a provided interface (Fig. 18c) accessible by selecting one of the pictures presented on an album page (Fig. 18b). The user may specify images to be added to his or her personal album, a subset of the images in the collection, which he or she may annotate with a title and text message, and make available to other users for viewing. The contents of a user's order may be reviewed and changed at any time prior to placement of the compiled order by accessing the review order interface (Fig. 19). The user may complete and place the compiled order using the checkout interface (Fig. 21). This interface provides for the collection of shipping and billing information necessary to process the order. Upon submission

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of this information, the user is prompted to enter credit card or other payment information, to acknowledge text explaining that the E-Prints™ operator is limited in its ability to guarantee the delivery and quality of products produced by third parties, and then to authorize payment.

The E-Prints™ system responds to the request to process the order with an e-mail confirming the contents of the order and that the order has been received by E-Prints™. The E-Prints™ system then charges the customer's credit card. If the charge is approved, the system e-mails order information to the photographer, and more or less simultaneously, generates a paper copy of the order to be sent to the photographer by postal mail and also sends an e-mail to the customer notifying him that the order has been forwarded to the photographer, and giving him an estimated delivery time and the information he needs to contact the photographer in case there are problems with the order. If the customer has not submitted an e-mail address with the order, or if the e-mail is bounced back as undeliverable, this information is printed out to be sent by postal mail.

If the order credit card charge is declined, an e-mail requesting corrected payment information is sent to the customer and the order is queued to a human operator. Optionally, an interface may be provided that lets the photographer check off orders upon fulfillment. This helps the photographer keep track of completed orders, and enables E-Prints™ to monitor fulfillment patterns. The photographer may access orders placed through his or her online proofbooks in the orders interface 105a. This interface provides a listing of each customer's itemized order. Images ordered may be selected, and cropping information may be added for each image for use in creation of photographic prints to fulfill the order.

It will be appreciated that the system or any part of it as described herein may be operated (designated herein as an E-Prints™ operator) by a licensed entity at remote locations.

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Various extensions and modifications to the above invention may be apparent to those skilled in the art. Accordingly, the present invention is not intended to be limited except as by the spirit and scope of the following claims.